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United States Department of the Interior
Fish and Wildlife Service

Fishery Leaflet 109

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PACIFIC OCEANIC FISHERY
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THE FISHERIES OF THE WORLD

By Arthur M. Sandberg*

The fishery resources of the world, throughout the history of man, have contributed to his food, employment, and well-being. Early civilizations were established close to the waters where they could utilize the abundant and reliable resources of the sea. In each country, part of the population has come to devote its life and energies to the catching and handling of fish and shellfish. As a result, fishery products have become established in the customary diets of all peoples. The vital part fishery resources play in the lives of men and nations is emphasized by the statistics of employment and production of the various countries.

Prior to World War II, the fisheries of the world annually produced about 37 billion pounds of fishery products, valued at almost a billion dollars.1/ Since the outbreak of the war, fishing operations have been curtailed in many areas due to the loss of men and vessels to the Armed Forces, shortages of gear, and restrictions on fishing due to military operations. As a result, the total catch of the world fisheries is currently considerably below pre-war production. This curtailment is reflected in actual and estimated figures and reports from the major producing countries.

An important problem facing the United Nations is that of producing an adequate supply of food for the countries liberated or occupied as the war progresses. Food responsibilities are likely to increase as additional territories are freed or conquered. An important source of food, which is readily available, is the fisheries in the vicinity of these areas. The high nutritive quality and digestibility of fish proteins class fish among the more desirable food products. These proteins balance the deficiencies of the cereal proteins which are included in the average diet. Much of the yield of the fisheries may be consumed directly as human food, while the remainder may be converted into such essential byproducts as vitamin oils, livestock, and poultry feeds, fertilizers, and industrial oils.

Of the total world fishery production of about 37 billion pounds, Asia accounts for about 49 percent, followed by Europe with 32 percent, and North America with 16 percent. Together, these areas produce 97 percent of the world total.

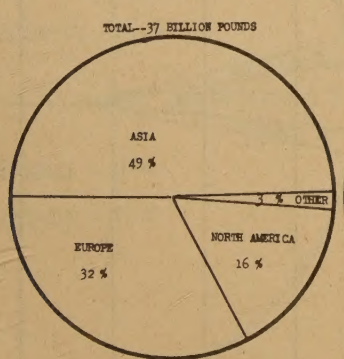

Figure 1--World Fishery Production by Continents

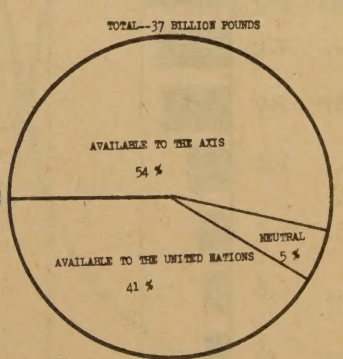

Figure 2--Control of the World's Fisheries in World War II

At the height of Axis power, it is estimated that the countries in that alliance controlled about 54 percent of the world's fisheries by volume. About 41 percent was available

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1/This value and those in the tables following, in practically all instances, are based on the value of the fish and shellfish to the fishermen.

Note: This leaflet supersedes FMN Sep. 70.

to the United Nations. The balance, or 5 percent, was taken by neutral countries and was available to either or both factions. Since that time, however, a number of fisheries formerly under Axis domination have become available to the United Nations.

The leading fishery nation of the world is Japan. Its fishing activities extend over the oceans of the world. Japan alone produces about 22 percent of the world catch of fishery products. Before the war, its fishing craft were at our front door in Alaska, off Mexico and off South America. Japan, at the present time, controls a number of the other important world fisheries. Among these are fisheries in China, Chosen, British Malaya, and the Philippines. In all, Japan is estimated to control about 38 percent of the world's fisheries, or a total of about 14 billion pounds.

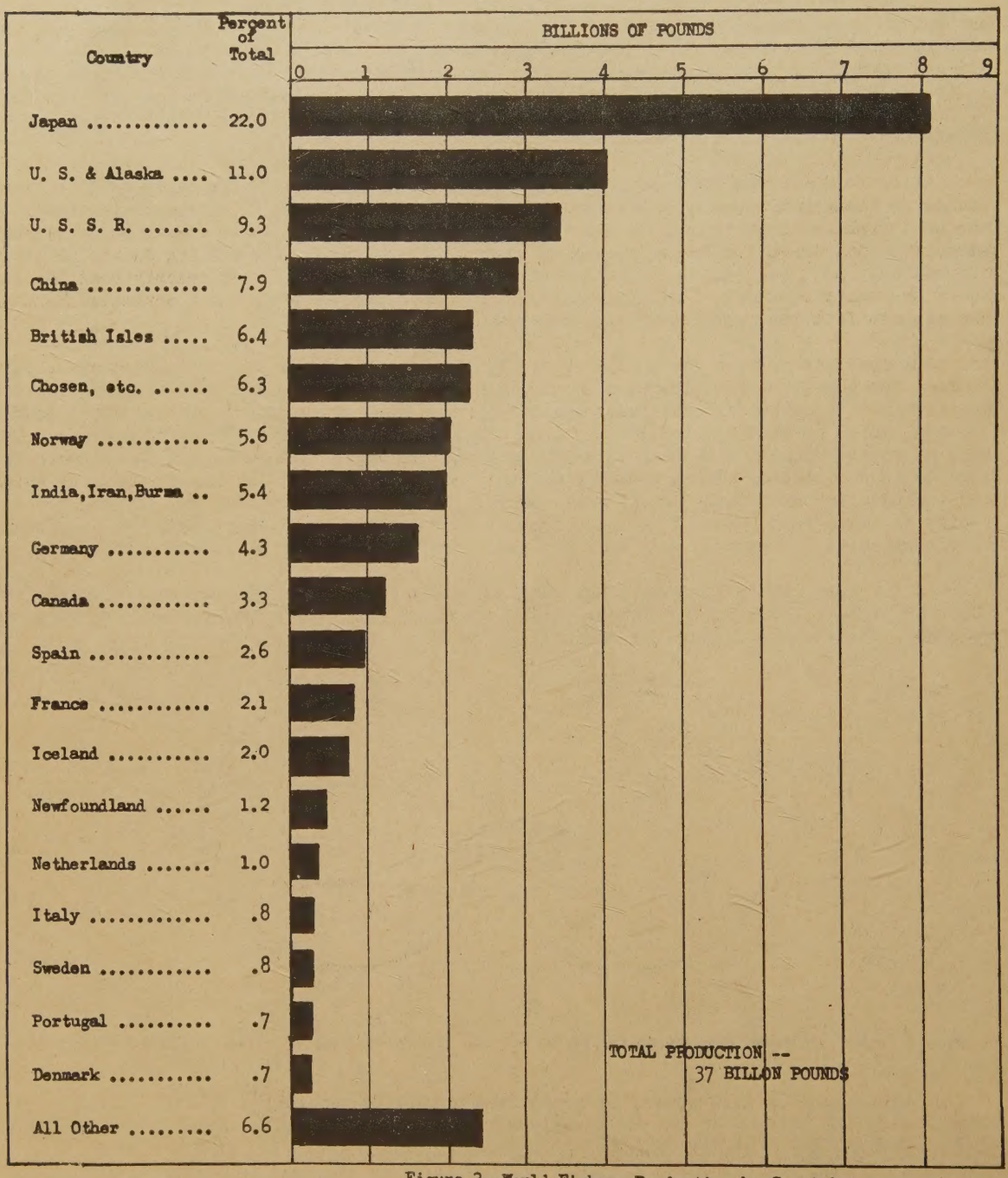

Figure 3--World Fishery Production by Countries

The United States fisheries rank second to those of Japan, but our fisheries, in the main, are carried on close to home. Exceptions are our tuna fleet which operates off Central and South America in the Pacific, our fishery for salmon, halibut, sharks, flounders, and other species off British Columbia. Our New England trawler fleet, which takes a considerable part of its catch on banks off the coasts of Canada, Nova Scotia, and Newfoundland, and our fishery for red snappers and groupers on Campeche Bank off the West Coast of Mexico. Before the war, about 14 percent of our catch was taken off foreign shores.

It is expected that greater use will be made of the known, but yet unexploited, resources of the northern waters of the Atlantic and Pacific in the post-war period. The fishing history of our nation indicates that we have fully exploited only a limited number of the most desirable species. Some outstanding examples of fisheries that could be more fully developed are the practically untouched Alaskan resources other than salmon, herring, and halibut, the trawl fishery off Washington and Oregon, the Pacific Coast anchovy fishery, New England's off-shore trawl fishery, and the menhaden fishery of the Atlantic Coast and Gulf of Mexico. By wise use of our available and potential fisheries, the United States could produce at least as much fish as Japan.

Other leading fishery nations are Russia, China, England, and Norway.

Ninety-eight percent of the world's fisheries products are taken in the Northern Hemisphere. Most of the world's population is found in this hemisphere and its fisheries have been more fully exploited. It has been reported, however, that there are extensive untouched fishery resources off the coasts of South America. This apparently is true also of other areas in the Southern Hemisphere.

The fisheries of the Pacific and Atlantic Oceans are almost equally productive. The former produces about 48 percent of the 37-billion pound world total, and the latter about 47 percent. Five percent of the catch is taken in the Indian Ocean. The North Pacific accounts for 47 percent of the world production and the North Atlantic for 46 percent. The larger portion of the catch in the Northern Hemisphere is caught north of the Tropic of Cancer in the Temperate Zone.

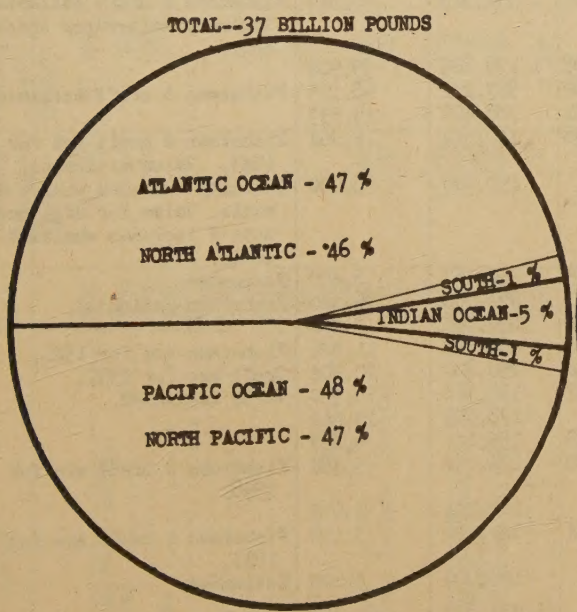

Figure 4--World Fishery Production by Waters

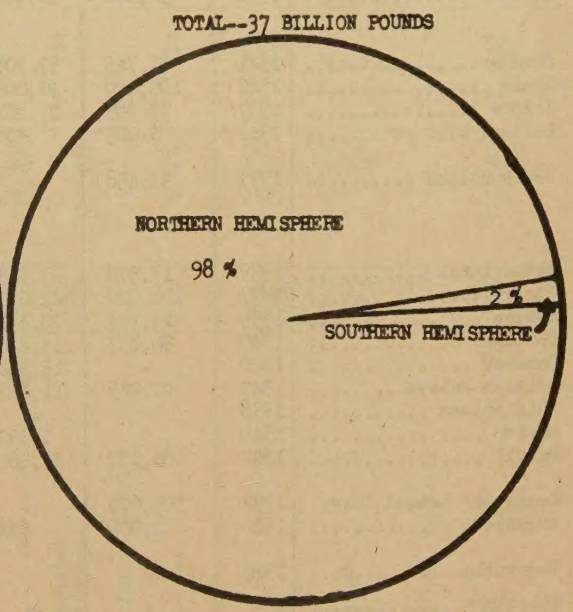

Figure 5--World Fishery Production by Hemispheres

The following tables contain data on the quantity and value of fishery products taken in the various countries and, when available, information on the number of fishermen and fishing craft employed. Data on the fisheries of the various countries have been obtained from consular reports, publications issued by various foreign countries and data collected by Fish and Wildlife Service representatives. In most instances, statistics on the whale and seal fisheries have not been included in the catch figures, and in a number of countries

Table I--Fisheries of the World: Production by Continents

Continent	Quantity	Value
	Pounds	Dollars
North America (including West Indies)	5,931,477,000	148,711,000
South America	468,557,000	16,382,000
Europe	11,776,832,000	396,894,000
Asia	18,084,467,000	247,209,000
Africa	394,601,000	16,705,000
Oceania	123,970,000	8,034,000
Total	36,779,904,000	833,935,000

the volume of shellfish taken are likewise omitted. Where data are known to be incomplete, this has been indicated in the tables. In a number of instances, it has been necessary to estimate the volume and value of the fishery. Accordingly, the data shown can be considered only approximately correct.

Table II--Fisheries of the World: Fishermen, Fishing Craft, and Production by Principal Countries

Country	Year	Fishermen engaged	Fishing craft	Quantity	Value	Remarks
		Number	Number	Thousands of pounds	Thousands of dollars	
Japan	1936	1,102,502	366,267	8,107,816	100,807	-
U. S. and Alaska	1940	124,795	71,810	4,059,524	98,957	-
U. S. S. R.	1938	250,000	-	3,432,000	82,368	Fishermen are for 1933. Value estimated.
China	1939	-	-	2,890,000	20,000	Estimated.
British Isles	1938	-	-	2,335,531	80,835	Quantity does not include shellfish.
Chosen (Japan)	1939	-	-	2,300,000	24,000	Quantity estimated.
Norway	1939	115,000	74,580	2,041,620	24,091	-
India, Iran, Burma	1932	-	-	2,000,000	20,000	Estimated.
Germany	1938	30,000	20,000	1,596,919	41,518	Fishermen & craft estimated. Includes salt-water species only.
Canada	1941	63,745	37,708	1,198,865	29,909	-
Spain	1940	195,000	40,000	967,252	68,275	Fishermen & craft estimated.
France	1937	73,989	23,201	788,400	45,537	-
Iceland	1942	5,003	708	740,514	16,264	Fishermen & craft are for 1943. Value estimated.
Newfoundland	1937	34,458	-	450,000	8,000	Quantity excludes whales & seals. Value for mfg. products & includes whales & seals.
Netherlands	1939	17,570	3,443	350,367	8,492	Estimated.
Italy	1937	108,000	42,051	304,000	26,000	Fishermen estimated.
Sweden	1939	23,114	20,378	292,866	7,830	-
Portugal	1940	36,837	13,630	260,588	11,926	Fishermen are for 1941.
Denmark	1940	-	15,350	250,800	10,904	Craft are for 1937.
British Malaya	1940	27,069	11,167	196,768	10,350	Value estimated.
Philippines	1938	-	-	178,055	10,544	-
Mexico	1940	-	2,195	155,141	6,887	-
Brazil	1940	80,002	31,300	134,252	5,584	Fishermen & craft are for 1938.
Kwangtung Leased Terr.	1937	305,000	-	132,704	4,673	-
Argentina	1940	2,000	824	121,122	3,125	Fishermen & craft are for 1933.
Venezuela	1940	-	-	100,000	3,000	Estimated.
All other	-	-	-	1,394,800	64,059	-
GRAND TOTAL	-	-	-	36,779,904	833,935	

Table III--Fisheries of the World: Fishermen, Fishing Craft, and Production by Continents and Countries

Continent and Country	Year	Fishermen engaged	Fishing craft	Quantity	Value	Remarks
		Number	Number	Thousands of pounds	Thousands of dollars	
North America:						
Canada	1941	63,745	37,708	1,198,865	29,909	-
Central America and West Indies:						
Bahamas (British)	1936	390	65	1,275	112	-
Barbados (")	1940	1,900	536	1,000	100	-
British Honduras	1940	-	-	500	50	Estimated.
Costa Rica	1940	-	-	1,000	60	Estimated.
Cuba	1940	-	-	15,000	1,200	-
Dominican Republic	1940	-	-	1,000	40	Estimated.
Dutch West Indies	1940	-	-	1,000	60	Estimated.
El Salvador	1940	-	-	700	28	Estimated.
French West Indies	1940	-	-	9,000	540	Estimated.
Guatemala	1940	-	-	100	4	Estimated.
Haiti	1940	-	-	2,000	80	Estimated.
Honduras	1940	-	-	300	12	Estimated.
Jamaica (British)	1940	1,200	400	10,000	800	Estimated.
Leeward & Windward Islands (British)	1940	1,437	327	3,600	350	Estimated. Men & craft for Leeward Is. only.
Nicaragua	1940	-	-	300	12	Estimated.
Panama	1940	-	-	3,000	240	Estimated.
Puerto Rico	1940	1,403	716	3,080	207	-
Trinidad & Tobago (British)	1940	2,870	948	6,000	600	Estimated.
Virgin Islands (British)	1940	200	72	160	13	Value estimated.
" " (United States)	1940	405	186	616	49	-
Greenland	1937	-	-	6,678	204	Includes exports only.
Mexico	1940	-	2,195	155,141	6,887	The 1941 production reported at 109,981,000 lbs., valued at $4,990,029.
Newfoundland	1937	34,458	-	450,000	8,000	Quantity excludes whales & seals. Value for mfg. products & includes whales & seals.
St. Pierre and Miquelon	1942	-	144	1,638	197	Includes salted green fish only.
United States and Alaska	1940	124,795	71,810	4,059,524	98,957	The 1943 production estimated at 4 billion lbs., valued at 180 million dollars.
TOTAL, North American countries		-	-	5,931,477	148,711	
South America:						
Argentina	1940	2,000	824	121,122	3,125	The 1942 production reported at 126,784,000 lbs.
Brazil	1940	80,002	31,300	134,252	5,584	Fishermen & craft for 1933. Fishermen & craft for 1938. The 1943 production estimated at 176 million lbs.
British Guiana	1940	692	384	500	50	Estimated.
Chile	1942	5,617	2,410	70,869	3,543	Value estimated.
Colombia	1940	-	-	3,500	210	Estimated.
French Guiana	1940	-	-	1,792	170	Estimated.
Peru	1940	6,568	2,404	26,097	365	-
Surinam (Dutch Guiana)	1940	-	-	3,748	200	Estimated.
Uruguay	1934	313	-	6,677	135	Fishermen are for 1940. The 1940 production reported at 7,334,000 lbs.
Venezuela	1940	-	-	100,000	3,000	Estimated.
TOTAL, South American countries		-	-	468,557	16,382	
Asia:						
Arabia	1936	-	-	2,003	86	Exports only.
British Malaya	1940	27,069	11,167	196,768	10,350	Value estimated.
Ceylon	1935	1,493	6,959	1,800	74	Estimated.
China	1939	-	-	2,890,000	20,000	Estimated.
Chosen (Japan)	1939	-	-	2,300,000	24,000	Quantity estimated.

Table III--Fisheries of the World: Fishermen, Fishing Craft, and Production by Continents and Countries (Cont'd.)

Continent and Country	Year	Fishermen engaged	Fishing craft	Quantity	Value	Remarks
		Number	Number	Thousands of pounds	Thousands of dollars	
Asia (Cont'd.):						
Hawaii	1937	4,000	999	19,706	1,501	Fishermen, craft & value estimated.
India, Iran, Burma	1932	-	-	2,000,000	20,000	Estimated.
Indo-China	1937	-	-	79,638	3,059	Includes exports only.
Japan	1936	1,102,502	366,267	8,107,816	100,807	-
Kwangtung Leased Territory (Japan)	1937	305,000	-	132,704	4,673	-
Palestine	1940	1,663	530	3,821	252	Fishermen & craft for 1941. The 1942 production reported at 3.9 million lbs., valued at $568,000.
Philippines	1938	-	-	178,055	10,544	-
Thailand (Siam)	1935	-	-	44,316	795	Includes exports only.
U. S. S. R. (Asia only)	1938	-	-	2,127,840	51,068	Value estimated.
TOTAL, Asiatic countries		-	-	18,084,467	247,209	
Europe:						
Belgium	1938	1,784	445	86,254	4,216	Fishermen & craft for 1936.
Bulgaria	1940	-	-	15,871	2,380	Value estimated.
British Isles:						
England and Wales	1938	-	-	1,711,704	59,945	Quantity does not include data on crabs, lobsters, & oysters.
Scotland	1938	-	-	592,938	18,751	Ditto
Ireland	1941	8,865	3,137	30,889	2,139	Ditto
Czechoslovakia	1937	-	-	6,500	390	Value estimated.
Danzig	1931	2,100	811	6,303	350	-
Denmark	1940	-	15,350	250,800	10,904	Craft for 1937.
Estonia	1935	-	-	40,477	602	The 1943 production reported at 22 million lbs.
Faroe Islands	1938	2,930	1,850	55,100	1,408	Estimated.
Finland	1933	-	-	79,362	2,381	-
France	1937	73,989	23,201	788,400	45,537	-
Germany	1938	30,000	20,000	1,596,919	41,518	Fishermen & craft estimated. Includes salt-water species only.
Greece	1937	6,860	2,015	39,537	3,817	Fishermen & value estimated. The 1938 production reported at 51 million lbs.
Iceland	1942	5,003	708	740,514	16,264	Value estimated. Fishermen & craft are for 1943
Italy	1937	108,000	42,051	304,000	26,000	Fishermen estimated.
Latvia	1932	3,907	524	29,752	324	-
Lithuania	1938	-	-	5,788	203	-
Maltese Islands	1938	1,300	700	2,380	265	-
Netherlands	1939	17,570	3,443	350,367	8,492	Estimated.
Norway	1939	115,000	74,580	2,041,620	24,091	The 1942 production reported at 1½ billion lbs.
Poland	1937	1,822	953	30,822	974	-
Portugal	1940	36,837	13,630	260,588	11,926	Fishermen are for 1941. The 1941 production reported at 403.5 million lbs., valued at $21,613,000.
Rumania	1938	-	-	79,738	4,183	The 1942 production reported at 89,621,000 lbs., valued at $4,705,000.
Spain	1940	195,000	40,000	967,252	68,275	The 1943 production reported at 979 million lbs., valued at $98,230,000. Fishermen & craft estimated.
Sweden	1939	23,114	20,378	292,866	7,830	The 1941 production reported at 249.4 million lbs., valued at $17,055,000.
Switzerland	1942	135	-	631	214	-
Turkey	1935	-	-	51,000	1,525	Quantity estimated.
U. S. S. R. (Europe only)	1938	-	-	1,304,160	31,300	Value estimated.
Yugoslavia	1936	18,294	6,293	14,300	690	The 1938 production reported at 17,635,200 lbs.
TOTAL, European countries		-	-	11,776,832	396,894	

(Table III continued on page 10)

Table III--Fisheries of the World: Fishermen, Fishing Craft, and Production by Continents and Countries (Cont'd.)

Continent and Country	Year	Fishermen engaged	Fishing craft	Quantity	Value	Remarks
		Number	Number	Thousands of pounds	Thousands of dollars	
Africa:						
Algeria	1936	3,609	1,081	44,780	3,162	-
Angola (Portugal)	1936	-	-	31,517	480	Includes sardines only.
Belgian Congo	1928	-	-	23,681	540	Includes exports only.
Canary Islands	1931	2,500	250	11,638	1,450	Quantity and value estimated.
Cyrenaica	1928	-	-	11,758	353	Includes sponges, sardines, & tuna only. Value est.
Egypt	1938	52,800	10,022	70,767	4,055	-
French Morocco	1933	2,323	511	42,580	1,264	-
French West Africa	1935	-	-	23,212	172	-
Kenya	1931	-	-	10,988	167	Includes exports only.
Morocco (Spanish & Intern. Zone)	1933	-	-	30,864	484	-
Seychelles	1925	600	350	1,560	61	-
Southwest Africa	1934	-	-	6,000	400	Estimated.
Tripoli	1934	-	-	1,910	220	Includes tuna only.
Tunisia	1937	10,820	3,130	23,346	1,397	-
Union of South Africa	1936	7,400	-	60,000	2,500	Fishermen estimated.
TOTAL, African countries		-	-	394,601	16,705	
Oceania:						
Australia	1939	9,081	5,462	72,732	5,850	-
Fiji Islands	1931	-	-	2,838	234	-
New Zealand	1939	2,218	1,279	48,400	1,950	The 1943 production reported at 35 million lbs., valued at $1,420,000.
TOTAL, Oceanic countries		-	-	123,970	8,034	
GRAND TOTAL		-	-	36,779,904	833,935	

Table IV--Fisheries of the World: Control of Fisheries in World War II[1/]
(In Thousands of Pounds--000 omitted)

Fishery	Quantity
Available to Axis Nations:	
Japan	8,107,816
China	2,890,000
Chosen	2,300,000
Norway	2,041,620
Germany	1,596,919
France	788,400
Netherlands	350,367
Italy	304,000
Denmark	250,800
British Malaya	196,768
Philippines	178,055
Kwangtung Leased Territory	132,704
Other	671,274
Total available to Axis Nations..	19,808,723
Neutral:	
Spain	967,252
Sweden	292,866
Portugal	260,588
Other	249,531
Total Neutral Nations	1,770,237

Fishery	Quantity
Available to the United Nations:	
United States & Alaska	4,059,524
U. S. S. R.	3,432,000
British Isles	2,335,531
India, Iran, Burma	2,000,000
Canada	1,198,865
Iceland	740,514
Newfoundland	450,000
Mexico	155,141
Brazil	134,252
Argentina	121,122
Venezuela	100,000
Other	473,995
Total available to United Nations	15,200,944
Summary:	
Available to Axis Nations	19,808,723
Available to United Nations	15,200,944
Neutral Nations	1,770,237
Grand Total	36,779,904

1/ This was the apparent distribution of the fisheries during the height of Axis power, or about 1942. A number of the fisheries listed above as available to the Axis have since then become available to the United Nations.

Table V--Fisheries of the World: Production by Waters
(In Thousands of Pounds--000 omitted)

Water	Quantity
Atlantic Ocean and confluent waters:	
Northern Hemisphere:	
Off North America, including the West Indies	3,229,944
Off South America	109,540
Off Europe, including the Mediterranean, Black, and Caspian Seas	13,176,813
Off Africa, including the Mediterranean	204,735
Total northern Atlantic	16,721,032
Southern Hemisphere:	
Off South America	262,051
Off Africa	121,198
Total southern Atlantic	383,249
Total Atlantic Ocean	17,104,281
Pacific Ocean and confluent waters:	
Northern Hemisphere:	
Off North America	2,721,239
Off Asia	14,718,657
Total northern Pacific	17,439,896
Southern Hemisphere:	
Off Oceania	123,970
Off South America	96,966
Total southern Pacific	220,936
Total Pacific Ocean	17,660,832
Indian Ocean and confluent waters:	
Southern Hemisphere off Africa	10,988
Northern Hemisphere off Asia	2,003,803
Total Indian Ocean	1/ 2,014,791
Grand Total	36,779,904

1/ The production of Western Australia in the Indian Ocean has been included with Pacific Ocean off Oceania and that of the Union of South Africa in the Indian Ocean has been included with the Atlantic.

Table VI--Fisheries of the World
Supplementary Table of Fisheries of Certain Countries Whose Catch is Obtained from Both the Atlantic and Pacific Oceans by Waters
(In Thousands of Pounds--000 omitted)

Country	Pacific and confluent waters	Atlantic and confluent waters
	Pounds	Pounds
Canada	534,353	644,512
Costa Rica	900	100
Guatemala	100	-
Honduras	200	100
Nicaragua	200	100
Panama	2,800	200
Mexico	142,311	12,830
United States and Alaska	2,019,969	2,039,555
Colombia	-	3,500
U. S. S. R.	789,360	1/ 2,642,640

1/ Includes fisheries of Caspian and Black Seas.

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